November 15, 1961

Dear Charley:

About three months ago I received in the mail three pages entitled "Three Dimensional Resolution Targets".

These probably came from you, although there was no covering letter. Probably you told me and I forgot.

The more printable comments I have received are:

1. These are not true resolution targets. While resolution targets can vary in form, they all are repetitive patterns with a square wave shape.

2. Difficult to visualize how the use of such a chart would give a definitive number which would be used to characterize the quality of a lens.

3. Seems like this chart would only give a qualitative indication of the detectability of the objects.

4. This detectability is influenced by:
   a. Solar altitude.
   b. Orientation of objects with respect to the run.
   c. The amount of haze.
   d. Film characteristics.
   e. Image motion compensation.

5. General concensus is that there are better means of determining lens quality separate from other system variables and probably better targets.

6. Some specification of the usefulness of three dimensional targets would have to be reviewed. What obliquities, what contrast ratios, what shadow angles are allowable, etc?

7. I am not convinced that the three dimensional targets mean more than targets in a plane. Once sine wave response or resolution of a lens is known, oblique resolution and oblique stereo capabilities are a matter of mathematics.

8. Why confuse lens testing with colors? Once the spectral reflectance curve of a body is known, all lens testing and film response can be based on the spectral curve rather than confused by filters and colored test objects.

ELG/MDG

E. L. G.